

[3411-15-P]

DEPARTMENT OF AGRICULTURE

Forest Service

RIN 0596-AC82

Ecosystem Restoration Policy

AGENCY: Forest Service, USDA.

ACTION: Notice of final directive.

SUMMARY: The Forest Service is issuing a permanent Ecosystem Restoration policy that replaces the Interim Directive, “Ecological Restoration and Resilience Policy,” in Forest Service Manual (FSM) 2020. The policy provides broad guidance for restoring ecosystems on National Forest System lands so that they are self-sustaining and, if subject to disturbances or environmental change, have the ability to reorganize and renew themselves. This policy recognizes the adaptive capacity of restored ecosystems, the role of natural disturbances, and uncertainty related to climate and other environmental factors.

DATES: This directive is in effect [**Insert date 30 days from date of publication in the FEDERAL REGISTER**].

FOR FURTHER INFORMATION CONTACT: Jim Alegria, Forest Management Staff, USDA Forest Service, Mailstop 1103, 1400 Independence Avenue, SW., Washington, DC 20250; phone: 202-205-1787.

Individuals who use telecommunications devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 between 8 a.m. and 8 p.m., Eastern Standard Time, Monday through Friday.

SUPPLEMENTARY INFORMATION:

Background and Need for the Directive

The need for reestablishing and retaining resilience of National Forest System lands and resources to achieve sustainable management and provide a broad range of ecosystem services is widely recognized, and the Forest Service has conducted restoration-related activities for decades. In 2008, the Chief of the Forest Service determined that a national policy was needed to ensure a consistent and cohesive approach to reestablish and retain ecological resilience on National Forest System lands and for National Forest System resources. An interim directive was first issued on September 22, 2008, and was reissued on March 3, 2010, August 30, 2011, May 13, 2013, November 17, 2014, and October 15, 2015.

A notice of availability of a proposed Ecological Restoration Policy (78 FR 56202) was published in the Federal Register on September 12, 2013 for public review and comment. A total of 16 comments were received: five from non-affiliated members of the public, two from State government agencies, four from the timber industry, and five from non-governmental organizations.

The Agency believes that a comprehensive policy that includes standard definitions would provide a tool for sustaining the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. The Forest Service is amending its directives by establishing a new title in the Forest Service Manual, FSM 2020: Ecosystem Restoration. The ecosystem restoration directive applies to all National Forest System resource management programs. The intent is to provide a clear, science-based policy to guide management actions where restoration is appropriate.

This policy provides that “ecosystem restoration” can be carried out through the processes of ecological restoration and functional restoration. Ecological restoration typically focuses on recreating the ecosystem conditions that were present prior to European influences. However, some ecosystems may have been altered to such an extent that reestablishing pre-European conditions may be ecologically or economically infeasible. In such circumstances, management goals and activities should create functioning ecosystems in the context of changing conditions through the process called functional restoration.

Ecosystem restoration can be achieved by a range of management activities, such as forest thinning to reduce tree density, prescribed fire to reduce fuel buildup, replacing culverts to better connect streams, or fencing to restrict disturbances. Ecosystem restoration may include manipulating or protecting terrestrial and aquatic ecosystems to assist in their recovery or adaptation to changing environmental conditions. Monitoring and evaluation of restoration projects are essential adaptive management steps for achieving sustainable ecosystems. Ecosystem restoration is a process that can help to achieve the multiple-use mission of the Forest Service, but not all management activities on National Forests and Grasslands require a restoration objective. For example, hazardous fuels reduction to reduce wildfire risk to communities may require a silvicultural treatment that is not restoration. Additionally, not all NFS lands need to be restored. Restoration activities will complement management to maintain conditions in areas with ecological integrity. The Agency may incorporate restoration objectives to the extent that they are ecologically and economically feasible and support achieving desired conditions or management objectives including multiple uses and ecosystem services such as carbon storage, energy development, recreation use, livestock grazing, hazardous fuels reduction, soil formation, watershed, wildlife, and timber production conducted in accordance with

applicable laws, regulations, and policies.

Restoration may be helpful in managing for climate change by maintaining carbon stocks provided by the national forests. The relationship between restoration and carbon is complex. The Forest Service manages carbon through managing the health and promoting the adaptive capacity of our forests in the face of frequent, intense, and severe disturbances. Management can also be designed to recover, maintain, and enhance carbon stocks, through restoration management practices. The Forest Service also maintains and restores carbon through treatment activities that restore the age and size-class patterns across the landscape. Some of the activities that the Forest Service undertakes for restoring resiliency and function in the National Forest System, such as thinning of forest stands and prescribed burning, can result in a release of carbon in the short term. In the long term, however, these activities should make the forest more resilient to disturbances such as wildfire, insects, and drought therefore reducing the risk to carbon stocks.

The expectation is that forest restoration treatments will lead to forest resilience and a lower probability of a catastrophic disturbance and that consequently, more carbon will continue to be sequestered than would otherwise occur without the treatment. How quickly the carbon pools sequester carbon depends on several factors including the amount of carbon removed or lost in the treatment, the productivity of the ecosystem, the site conditions, the climate variables following the treatment, and the stand structure. Due to the many variables and assumptions regarding post-treatment carbon capture, research on whether restoration increases carbon stocks is inconclusive. Some studies indicate that post-treatment forest stands never catch up to the carbon stocks in untreated stands. However, other studies have concluded that treated stands lose less overall carbon in subsequent wildfire events compared to untreated stands and that

reductions in wildfire severity have a significant impact on future carbon pools. Other studies have demonstrated that forest harvesting can reduce atmospheric CO₂ if the carbon accounting considers avoided emissions from fossil fuels when biomass is used for energy, or the avoided emissions and carbon storage when long-lived harvested wood products are substituted for high embodied energy materials such as steel and concrete.

The Ecosystem Restoration policy has identical definitions for key terms that are in the 2015 National Forest System, Land Management Planning Directive (FSH 1909.12, zero code, section 05). By using identical definitions, the policy ensures that within the Agency, and in dealing with the public, terms will be used and understood in the same way. The terms and definitions are: adaptation, adaptive capacity, adaptive management, carbon pool, carbon stocks, disturbance, disturbance regime, ecological restoration (see “restoration - ecological”), functional restoration (see “restoration - functional”), ecological integrity, ecosystem, ecosystem services, landscape, natural range of variation (NRV), resilience, stressors, and sustainability.

Some of the terms defined in 2015 National Forest System, Land Management Planning Directive (FSH 1909.12, zero code, section 05) such as ecological and functional restoration, natural range of variation and resilience, merit further discussion on how they interrelate to one another. In order to construct a desired future condition for an area, one should assess past and current conditions as well as how these conditions may change into the future. Ecological restoration focuses on reestablishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystem sustainability, resilience, and health under current and future conditions. Assessing current and potential future conditions should result in a detailed description of the composition, structure, pattern, and ecological processes of

the ecosystem as it moves along an ecological trajectory through time. Moving along a trajectory means that ecosystems are not static and may have changing characteristics.

The desired future condition of an ecosystem should be informed by an assessment of spatial and temporal variation in ecosystem characteristics under historic disturbance regimes during a specified reference period. The spatial and temporal variation of characteristics in the specified reference period is often called the natural range of variation (NRV). The NRV should be used to inform an understanding of ecosystem function and biophysical capability, the dynamic nature of ecosystems associated natural and current disturbance regimes, and potential responses to future environments resulting from climate change and increasing human uses. The NRV does not define a management target or desired condition; it provides context for understanding ecological integrity. In some situations, the desired future condition may be a restored ecosystem similar to pre-disturbance conditions where degradation and stressors are limited and minimal changes to environmental conditions are anticipated in the near future. In other situations, the desired future condition may be a restored ecosystem that departs from the NRV along a continuum from only slight to substantial but still retains some ecological components within the NRV.

Like ecological restoration, functional restoration is a process to restore degraded biotic and abiotic processes to facilitate the creation of a desired future condition. A functionally restored ecosystem, however, may look quite different than the NRV in terms of structure and composition, where the disparities cannot be easily changed because some threshold of degradation has been crossed or significant environmental drivers, such as climate or invasive species, that influenced structural and (especially) compositional development have changed. The desired outcome of a restoration treatment may incorporate concepts from both ecological

and functional restoration. For example, ecological conditions for some native species, due to insects and diseases, are no longer functioning as they once functioned and cannot be restored to their previous state. There are invasive species that have become so established that they cannot be economically eradicated. Climate change may affect components of the ecosystem differently so that some components should be restored to within the NRV and others should not or cannot be restored. In these situations the objective should be to restore the abiotic and biotic processes even if the components diverge from the NRV.

Resilience is the ability of an ecosystem and its component parts to absorb, or recover from, the effects of disturbances through preservation, restoration, or improvement of its essential structures, functions, and redundancy of ecological patterns across the landscape. It is a characteristic of healthy ecosystems and a desired characteristic of a restored ecosystem.

RESPONSE TO COMMENTS ON THE PROPOSED POLICY

Changes between the proposed and final policy

Based on external and internal comments, there were changes between the proposed and final policy. The major changes are listed below.

1. The title has changed from “Ecological Restoration” to “Ecosystem Restoration” in the final policy, to better align the title with the content of the final policy and the mission of the Agency.
2. The final policy adds consideration for the recovery, maintenance, and enhancement of carbon stocks associated with National Forest System lands.

3. The final policy does not change the definition of ecological restoration but does clarify the relationship of ecological restoration to functional restoration and resilience.
4. The final policy facilitates achieving long-term ecological sustainability and a broad range of ecosystem services and multiple uses to society in Objectives (FSM 2020.2).
5. The final policy uses key terms that are in the 2015 National Forest System, Land Management Planning Directive and uses the same definitions for those terms. (FSH 1909.12, zero code.
6. The final policy retains the summaries of the principal legal authorities for the policy FSM 2020.11, but now lists other statutes, without summaries, in FSM 2020.61.
7. The Executive Orders (FSM 2020.12) descriptions are eliminated and replaced with the citations to those Executive Orders in FSM 2020.63.
8. The agency removed most of FSM 2020.4 because it was redundant with the general delegations of authorities of FSM 1230. The Agency has concluded that the responsibilities for restoration belongs to those Agency employees who have the delegated authority to approve land and resource management plans, project plans, or other Forest Service activities.
9. Definitions of key terms were deleted in the final policy and replaced with a reference to the definitions in planning rule (36 CFR 219.19) and planning handbook (FSH 1909.12, Zero Code chapter, section 05).

General comments on the Proposed Policy

Comment: Respondents questioned how the directive will help achieve national forest management objectives or how not having the directive will prevent achieving national forest

management objectives. Others questioned how the directive would increase Agency effectiveness, they questioned the need for a permanent ecological restoration policy, and they questioned why there is no attempt to prioritize ecological restoration within the context of relevant laws or ecosystem components.

Response: Restoration spans a number of initiatives in various program areas, including the invasive species strategy; recovery of areas affected by high-severity fires, hurricanes, and other catastrophic disturbances; fish habitat restoration and remediation; riparian area restoration; conservation of threatened, endangered, and sensitive species; and restoration of impaired watersheds and large-scale watershed restoration projects. There was no framework to unite these various program-specific initiatives with cohesive policies and definitions. While restoration has been a long-standing Agency practice, even without a restoration policy, a cohesive policy is expected to increase the Agency's efficiency in achieving management objectives. The authority for restoring National Forest System lands derives from laws enacted by Congress that define the purpose of national forests and grasslands and direct the Forest Service to administer and manage the lands for these purposes. The major authorities are cited in FSM 2020.1. The prioritization of ecological restoration is guided by the responsible official, which is usually the forest supervisor or district ranger.

Comment: Another respondent asked how this directive will affect implementation of the 2012 planning rule.

Response: The 2012 planning rule emphasizes restoration as it guides the Forest Service in the development, amendment, and revision of land management plans. The policies, ecological principles, and definitions in this final directive are consistent with the planning rule and will also guide activities on those units that have not yet developed, amended, or revised

land management plans under the planning rule, and it provides further guidance on ecosystem restoration.

Comment: Some respondents felt that the term “restoration” was too limiting and that it may not be economically or ecologically possible to achieve NRV due to factors such as climate change or severely degraded environments. The terms “ecological integrity” and “NRV” are past-focused and ignore adaptation to future climate and anthropogenic stressors.

Response: The policy has been clarified in the final directive. Emphasis has been placed on returning an impaired ecosystem to a condition of appropriate complexity and increased resilience through ecosystem restoration or functional restoration. The aim of both ecological and functional restoration is to restore degraded processes to facilitate the creation of a desired future condition. The final policy acknowledges that, when an ecosystem has been so degraded such that it is impossible or impractical to return conditions to those within the NRV, or that the projected environmental conditions will not support returning an ecosystem to be within the NRV, the *functional restoration* may be appropriate to restore ecological processes but achieve the essential functions of the ecosystem with different species composition and structure than pre-European settlement conditions. Functional restoration can sometimes serve as the best approach to restoring ecological integrity within the inherent capability of the planning area.

Comment: Other comments included that a broad-scale restoration policy fails to account for localized historic influences, that there is a lack of an active role for forest management in the policy, and that the policy would result in an underrepresentation of early seral stages on the national forests.

Response: The broad-scale or ecosystem restoration approach emphasized in the policy includes evaluating the current seral stage distribution and connectivity against the desired

conditions, which may include early seral stages, specialized habitats, and historic influences. The mechanism to achieve the desired conditions are decided on a project-by-project basis and may include active forest management to restore the stand age distribution to be within NRV.

Comment: Another respondent stated that the definitions are circular: ecological integrity is a set of conditions that are within the NRV and is relative to a historic reference period. Consequently, since the NRV defines ecological integrity, one could argue, any management action that strays from NRV is degrading the ecosystem.

Response: The management objective for any area is governed by the applicable land management plan. The land management plan must provide for social, economic, and ecological sustainability within Forest Service authority and consistent with the inherent capability of the plan area (36 CFR 219.8). NRV is “The variation of ecological characteristics and processes over scales of time and space that are appropriate for a given management application.” The definition of the term elaborates that “The NRV is a tool for assessing the ecological integrity and does not necessarily constitute a management target or desired condition” (FSM 2020.5, citing the planning handbook at FSH 1909.12, zero code, section 05). Consequently, management actions that are consistent with the inherent capability of the plan area are the best approach to restoring ecological integrity.

Specific Comments on the Proposed Policy

Comment: One commenter stated that contemporary ecology has abandoned the concept of NRV due to the arbitrary nature of agreeing on a time scale, or due to the implied exclusion of historic burning by Native Americans, and added that ecologists have advocated the term HRV (historic range of variability). Another commenter stated that the term "Ecological Integrity" is misleading by indiscriminately implying that "species composition can withstand and recover

from most perturbations imposed by natural environmental dynamics or human influence" and adds, as an example, that this definition seems to have no coherent relevance to species whose survival has depended on burning by Native Americans.

Response: The final policy retains the concept of NRV. The time period used in the definition for natural range of variation is pre-European, and, therefore, includes historic burning by Native Americans. Therefore, this policy would apply to the restoration of species that were dependent on burning by the Native Americans.

Comment: The definition for ecosystem includes basic ecological functions such as hydrological and nutrient cycling. The definition should also include "capture, storage, and release of water and nutrients." It could be argued that "nutrient cycling" includes all these processes, but our concern arises because both old growth forest and young plantation cycle nutrients, but there is a big and important difference between the nutrient capital stored in each. Restoration should include recovery of lost capital. In addition, if "function" and "process" are to be used synonymously, then "growth and mortality" should be added to the definition of ecosystem.

Response: The suggested text to add capture, storage, and release of water and nutrients to hydrological and nutrient cycling to differentiate between old growth forests and young plantations was not adopted in the final policy. Ecological restoration focuses on reestablishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystem sustainability, resilience, and health under current and future conditions. The primary objective of restoration is to place the ecosystem along an ecological trajectory that is sustainable.

The recommendation to add “growth and mortality” was not adopted. Although they are important processes, they are sub-processes of energy flow and would not be at the same relative level as the basic ecological functions of energy flow, nutrient cycling and retention, soil development and retention, predation and herbivory, and natural disturbances.

Comment: One respondent wanted to add a definition of ecological composition to the list of definitions at FSM 2020.5 because composition is a critical component of ecological function, structure, and process.

Response: The definition of ecosystem, in the planning rule and planning handbook, at FSH 1909.12, zero code, section 05, includes and explains the concept of composition. The addition of a separate definition for ecological composition is, therefore, unnecessary.

Comment: Revise the definition of “Ecological Integrity” to eliminate the requirement to manage within the NRV.

Response: The definition of “ecological integrity” was not changed in the final policy. There is no requirement to manage within the NRV. The NRV is a tool for assessing ecological integrity and does not necessarily constitute a management target or desired condition (FSM 2020.5, citing the planning handbook at FSH 19012.12, zero code, section 05).

Comment: Respondents were concerned that restoration and ecological sustainability were being placed above other forest uses and that all the activities on national forests will be required to have a restoration objective.

Response: The final policy has been clarified to state that not all activities on National Forest System lands are required to have a restoration objective.

Comment: FSM 2020.3(6) omits requirements for consultation with State and local government entities.

Response: There is no statutory, regulatory, or policy requirement to consult with State and local government entities, but the expectation to engage with State and local governments has been added to FSM 2020.3(6).

Comment: The objectives fail to acknowledge the mandates of the Multiple-Use Sustained-Yield Act and the National Forest Management Act of 1976.

Response: Restoration is accomplished to ensure that resources are usable and sustainable into perpetuity; consequently this policy is wholly compatible with the Multiple-Use and Sustained-Yield Act and the National Forest Management Act of 1976. In addition, a statement has been added to the final policy that explicitly acknowledges that this policy must comply with all applicable laws and regulations, including the Multiple-Use and Sustained-Yield Act, the National Forest Management Act of 1976, and the principal statutes listed in FSM 2020.11.

Comment: The responsibilities of Forest Supervisors (FSM 2020.45) and District Rangers (FSM 2020.46) should be expanded to include incorporation of net restoration goals and outcomes in all forest management projects. If restoration is just one among many types of projects undertaken by District Rangers, while they also pursue non-restorative actions, there is no assurance of net progress toward restoration objectives.

Response: The final wording in the policy is unchanged. The Forest Service does not have net restoration goals and outcomes. Although restoration is a key objective for the Forest Service, there are other projects that are not restoration, such as fuels reduction treatments within the wildland urban interface. However, the Forest Supervisors and District Rangers are responsible for development and approval of projects to reestablish and retain ecological

resilience of National Forest System lands and resources to achieve sustainable management and provide a broad range of ecosystem services that are consistent with regional and national policy.

Comment: The proposed policy states that restoration management activities for ecosystems should “assist in their recovery from the impacts of human uses.” This statement implies that human uses should be removed to accomplish objectives.

Response: The policy statements in the final directive have been revised to provide that “restoration activities should be evaluated within the context of NRV, the potential future climate trajectories, and to counter detrimental human uses.”

Comment: Respondents suggested that the Policy section (FSM 2020.3) should also promote ecosystem processes and function, biodiversity, and soils.

Response: No change to the policy is needed. Ecosystem restoration is the objective of the policy, and the definition of “ecosystem” states that it is commonly described in terms of its composition), and function, including soil development and retention (see FSM 2020.5 and the planning handbook at FSH 1909.12, zero code); consequently, the respondent’s suggestions were already incorporated in the proposed as well as the final policy.

Comment: Respondents questioned the presumed link between historic system processes (implied by the use of the word “reestablish”) with the processes required to support “ecosystem sustainability, resilience, and health under current and future conditions.” The respondents believe there will be confusion in the implementation of the policy due to the differences in processes necessary to support historic systems and those to support current and future conditions; one example is warming conditions.

Response: The final policy includes slight modifications to include the most recent research that more fully takes into account climate change. The term *functional restoration* has

been added to acknowledge that in some situations it is not possible or desirable to reestablish key ecosystem characteristics within the NRV. The policy provides the flexibility to define desired conditions under warming conditions outside the NRV, if necessary.

Comment: Another respondent found that the Objective section focuses on building resiliency, whereas the Policy section focuses on restoration.

Response: Resilience is a desired property of a restored ecosystem. The use of the terms “resilience” and “restoration” are found in the Objective section (FSM 2020.2) and the Policy section (FSM 2020.3) by design. However, a definition of the term *resilience* has been listed as available in FSH 1909.12, zero code chapter, section 05 to clarify the meaning when the term is used in the policy.

Comment: A respondent was concerned that the proposed policy did not address the causes that contribute to ecological degradation, such as grazing and fire suppression. Another respondent stated that the policy should explicitly recognize the potential conflict between restoration goals, such as fuel reduction versus biomass accumulation, and that an objective of the policy should be to harmonize conflicting goals.

Response: The purpose of this policy is to establish broad direction for reestablishing and retaining ecological resilience of National Forest System lands and associated resources to achieve sustainable management and provide a broad range of ecosystem services. It is always the case that, as the Forest Service engages in day-to-day management of units of the National Forest System, the responsible official considers potential conflicts, which may include conflicts between restoration goals.

Comment: Some respondents were concerned that the policy has the potential to limit the available areas of Forest Service land for recreation and to arbitrarily close trails to off-highway-

vehicle recreation, and that the Forest Service should recognize that recreation and other multiple uses are legitimate uses on NFS lands.

Response: A statement has been added in the Policy section (FSM 2020.3) that explicitly acknowledges that this policy must comply with all applicable laws and regulations, including the Multiple-Use Sustained-Yield Act (MUSYA) and the National Forest Management Act (NFMA) of 1976, and the statutes listed in FSM 2020.11. Managing for multiple-use and sustained-yield of goods and services has often required the Forest Service to deal with several conflicting factors and uses at the same time. In some instances, restoration may indeed limit some uses. But, this policy does not mandate restoration in all situations. When and how to restore specific ecosystems will still be a case-by-case matter for the Forest Service's responsible officials who will be informed by public involvement.

Comment: The Policy section (FSM 2020.3) in the proposed policy should be rewritten to focus on creating functioning systems.

Response: The language has been changed to emphasize that goals and activities should focus on restoring the underlying processes that create functioning ecosystems where appropriate.

Comment: The following sentence should be added within the final Policy section (FSM 2020.3): "The NRV is a tool for assessing the ecological integrity and does not necessarily constitute a management target or desired condition."

Response: Although the suggested text was not added to the final Policy section it is included in the definition of the NRV (FSM 2025, citing the planning handbook at FSH 1909.12, zero code, section 05).

Comment: The policy should stress functional restoration, not ecological restoration, or it should at least provide a logical link between functional restoration and ecological restoration; functional restoration should be defined in the policy.

Response: In the final directive, functional restoration has been added to the Policy (FSM 2020.3) and the Definition (FSM 2020.5) sections. An explanation of its use and relationship with ecological restoration is in the “Background and Need for the Directive” section of this document.

Comment: Reversing the order of the objectives would change the tone to a more forward-looking policy.

Response: The order of the objectives (FSM 2020.2) has been changed and the objectives themselves have been clarified in the final policy.

Comment: Respondents noted that social and economic sustainability as well as ecological factors should be emphasized within the policy.

Response: Consideration for public values and desires, and the contribution to ecological, social, and economic sustainability, among other considerations, has been added to the Policy section, FSM 2020.3(3)(b).

Interim Directives

The Forest Service has been using an interim directive since 2008. Below are the major differences between the interim directive and the permanent policy:

1. The title has changed from “Ecological Restoration and Resilience” to “Ecosystem Restoration” in the final policy, to better align its title with its content (establishing that not only ecological restoration but also functional restoration are appropriate approaches) and with the mission of the Agency.

2. The final policy adopted from the 2012 Planning Rule directives (FSH 1909.12) the concepts, terms, and definitions for the following: functional restoration, natural range of variation, adaptation, disturbance, disturbance regime, landscape, stressors, and sustainability.
3. The final policy adds to the Policy section (FSM 2020.50 a requirement to give consideration for the recovery, maintenance, enhancement, and the resilience of carbon stocks associated with National Forest System lands.
4. The final policy adds in the Policy section public values and desires; contributions to ecological, social, and economic sustainability; the natural range of variation (NRV); and ecological integrity as matters to consider in development of restoration goals or objectives.
5. The contents of the Principles section (FSM 2020.6) in the interim directive was distributed to other sections of the final policy and the Principle section was dropped.
6. The final policy adds guidance for ecological and functional restoration activities.

Regulatory Certification

Environmental Impact

This final directive establishes policy for restoring and managing ecosystems on National Forest System lands, but does not direct that any specific action be taken. Forest Service NEPA procedures at 36 CFR 220.6(d)(2) excludes from documentation in an environmental assessment or environmental impact statement “rules, regulations, or policies to establish Service-wide administrative procedures, program processes, or instructions.” The Agency’s conclusion is that this final directive falls within the category of actions in 36 CFR 220.6(d)(2); no extraordinary

circumstances exist which would require preparation of an environmental assessment or environmental impact statement.

Regulatory Impact

This final directive has been reviewed under USDA procedures and Executive Order 12866, Regulatory Planning and Review. This is not an economically significant action. This action would not have an annual effect of \$100 million or more on the economy nor adversely affect productivity, competition, jobs, the environment, public health or safety, nor State, local, or Tribal governments. This action would not interfere with an action taken or planned by another agency. This action would not alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients of such programs. However, this final directive has been designated as significant and therefore is subject to Office of Management and Budget review under Executive Order 12866.

In accordance with OMB circular A-4, “Regulatory Analysis,” a cost/benefit analysis was conducted comparing the costs and benefits associated with the “no action” alternative of not having an Agency policy and the alternative of adopting the final restoration policy. Many benefits and costs associated with the final Agency policy are not quantifiable. Benefits include providing consistent and uniform understanding and Service-wide application of restoration policies, principles, and terminology; increasing Agency effectiveness when planning and implementing ecosystem management activities; and fostering better understanding and collaboration among interests from local to national levels. It is anticipated that this final directive would reduce costs by providing clear policy, definitions, and principles for restoring or modifying ecosystems, thereby reducing ad hoc or inconsistent interpretation of terminology and policy.

This final directive has been reviewed in light of the Regulatory Flexibility Act, as amended (5 U.S.C.601 *et seq.*), and this action will not have a significant economic impact on a substantial number of small entities as defined by that Act. A threshold regulatory flexibility analysis is not required, under the Regulatory Flexibility Act, because this directive is broad Agency policy that imposes no impacts or requirements on small or large entities. This directive will increase Agency effectiveness when planning and implementing restoration activities at the local level.

Federalism

The Agency considered this final directive under requirements of Executive Order 13132, Federalism. The Agency concludes this final directive conforms to the federalism principles set out in this Executive Order; will not impose any compliance costs on the States; and will not have substantial direct effects on the States or the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, the Agency has determined that no further assessment of federalism implications is necessary.

Consultation and Coordination with Indian Tribal Governments

Pursuant to Executive Order 13175 of November 6, 2000, “Consultation and Coordination with Indian Tribal Governments,” Tribes were invited to consult on the proposed directive prior to review and comment by the general public. The consultation process was initiated through written instructions from the Deputy Chief for the National Forest System to the Regional Foresters and subsequently to the Forest Supervisors. Upon request from the Tribes, formal consultation was conducted by the Forest Supervisors and/or District Rangers with

assistance from staff. Tribal comments were submitted to the Washington Office staff designated as lead for this policy and were addressed in the notice of proposed directive that was published in the *Federal Register*.

Implementation of this directive primarily occurs at the local level (national forest or grassland unit) through land management and project-level planning and accomplishment. When local actions are initiated, another level of consultation would occur with Tribes at the local level where site-specific land and resource management goals and objectives are established. Also, at that level, the design and effects of management activities are most effectively addressed in relation to the Agency's tribal trust responsibilities and Indian tribal treaty rights to assure Tribal interests are respected.

This final directive establishes broad policy for reestablishing and retaining ecological resilience of National Forest System lands and resources to achieve sustainable management and provide a broad range of ecosystem services but does not directly affect the occupancy and use of National Forest System land. The Agency has assessed the impact of this final directive on Indian Tribes through tribal consultation and determined that it does not have substantial direct or unique effects on Indian Tribes, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes.

The Agency has also determined this final directive does not impose substantial direct compliance costs on Indian tribal governments or preempt tribal law.

No Takings Implications

This final directive has been analyzed in accordance with the principles and criteria contained in Executive Order 12630, Governmental Actions and Interference with

Constitutionally Protected Property Rights, and it has been determined this final directive does not pose the risk of a taking of protected private property.

Civil Justice Reform

This final directive has been reviewed under Executive Order 12988 “Civil Justice Reform.” After adoption of the final directive, (1) all State and local laws and regulations that conflict with this final directive or that would impede full implementation of this directive would be preempted; (2) no retroactive effect would be given to this final directive; and (3) this final directive would not require the use of administrative proceedings before parties could file suit in court challenging its provisions.

Unfunded Mandates

Pursuant to Title II of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531-1538), signed into law on March 22, 1995, the Agency assessed the effects of this final directive on State, local, and tribal governments and the private sector. This final directive does not compel the annual expenditure of \$100 million or more by any State, local, or tribal government in the aggregate or by anyone in the private sector. Therefore, a statement under section 202 of the act is not required.

Energy Effects

This final directive has been reviewed under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. It has been determined this final directive does not constitute a significant energy action as defined in the Executive Order.

Controlling Paperwork Burdens on the Public

This final directive does not contain any additional record keeping or reporting requirements or other information collection requirements as defined in 5 CFR part 1320 that are not already required by law and already approved for use, and therefore imposes no additional paperwork burden on the public. Accordingly, the review provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) and its implementing regulations at 5 CFR part 1320 do not apply.

FOREST SERVICE MANUAL

The Forest Service policy is established in Forest Service Manual 2020 as follows:

CHAPTER 2020 –ECOSYSTEM RESTORATION

FSM 2020 provides policy for reestablishing and retaining ecological resilience of National Forest System lands and resources to achieve sustainable multiple use management and provide a broad range of ecosystem services. Resilient ecosystems have greater capacity to survive disturbances and large-scale threats, especially under changing and uncertain future environmental conditions, such as those driven by climate change and human uses. The directive reaches across all program areas and activities applicable to management of National Forest System lands and resources so as to ensure integration and coordination at all levels and organizational units. It does not directly affect land management plans or the occupancy and use of National Forest System lands, leaving to responsible officials the discretion to decide when and how to authorize restoration projects and activities. When applying or implementing this policy, the Forest Service must comply with applicable laws and regulations, including the National Forest Management Act (NFMA), Multiple-Use Sustained-Yield Act (MUSYA), and the principal statutes in section FSM 2020.11.

2020.1 – Authority

The authority for sustainably managing the National Forest System derives from laws enacted by Congress that set out the purpose for which it has been established and is to be administered. These laws are cited throughout the Forest Service Manual and Handbooks. FSM 1010 lists the most significant laws and provides guidance on where to obtain copies of them.

The history of federal policies, treaties, statutes, court decisions, and Presidential direction regarding Indian Tribes and tribal rights and interests is extensive. FSM 1563.01a through FSM 1563.01i set out the legal authorities relevant to Forest Service relationships with Tribes.

The President issued direction through several Executive Orders relevant to protection of resources or restoration of ecosystem processes and functions (FSM 2020.12). Also, numerous regulations governing the sustainable management and restoration of National Forest System lands are found in the Code of Federal Regulations under Title 36, Chapter II, parts 200-299.

2020.11 – Laws

The principal statutes governing the reestablishing and retaining of the ecological resilience of National Forest System lands and resources to achieve sustainable multiple use management and provide a broad range of ecosystem services, include but are not limited to, the following statutes, which are listed in alphabetical order. Except where specifically stated, these statutes apply to all National Forest System lands and resources.

1. *Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974*, as amended by *National Forest Management Act (NFMA) of 1976* (16 U.S.C. 1600-1614, 472a). This Act states that the development and administration of the renewable resources of the National Forest System are to be in full accord with the concepts for multiple use and sustained yield of products

and services as set forth in the Multiple-Use Sustained-Yield Act of 1960. The Act establishes the policy of the Congress that all forested lands in the National Forest System be maintained in appropriate forest cover with species of trees, degree of stocking, rate of growth, and stand conditions designed to secure the maximum benefits of multiple-use, sustained-yield management in accordance with land management plans. It sets forth the requirements for land and resource management plans for units of the National Forest System, including requiring guidelines to provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.

2. *Healthy Forests Restoration Act (HFRA) of 2003* (16 U.S.C. 6501-6591). This Act provides processes for developing and implementing hazardous fuel reduction projects on certain types of "at-risk" National Forest System and Bureau of Land Management (BLM) lands, and also provides other authorities and direction to help reduce hazardous fuels and protect, restore, and enhance healthy forest and rangeland ecosystems.

3. *Multiple-Use Sustained-Yield Act of 1960* (16 U.S.C. 528-531). This Act states that the National Forests are to be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes, and adds that the establishment and maintenance of wilderness areas are consistent with this Act. This Act directs the Secretary to manage renewable surface resources of the National Forests for multiple use and sustained yield of the several products and services obtained therefrom. Multiple use means the management of all the various renewable surface resources of the National Forests in the combination that will best meet the needs of the American people; providing for periodic adjustments in use to conform to changing needs and conditions; and harmonious and coordinated management of the resources without impairment of the productivity of the land. Sustained yield of the several products and services means

achieving and maintaining in perpetuity a high-level annual or regular periodic output of renewable resources without impairment of the productivity of the land.

4. *Organic Administration Act* (at 16 U.S.C. 475, 551). This Act states the purpose of the National Forests, and directs their control and administration to be in accord with such purpose, that is, “[n]o national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States.” The Act authorizes the Secretary of Agriculture to “make such rules and regulations . . . to preserve the [national] forests from destruction.”

Other statutes, regulations, and Executive Orders related to the policies in the restoration policy are referenced in FSM 2020.6.

2020.2 – Objective

Ecosystems ecologically or functionally restored, so that over the long term they are resilient and can be managed for multiple use and provide ecosystem services, including but not limited to carbon storage and sequestration.

2020.3 – Policy

1. The Forest Service will emphasize ecosystem restoration across the National Forest System and within its multiple use mandate.
2. The Forest Service land and resource management plans, project plans, and other Forest Service activities may include goals or objectives for restoration. The goals or objectives for ecosystem restoration must be consistent to all applicable laws and regulations. In development of restoration goals or objectives, the Forest Service should

consider:

a. factors such as the following:

- (1) public values and desires;
- (2) the natural range of variation (NRV);
- (3) ecological integrity;
- (4) current and likely future ecological capabilities;
- (5) a range of climate and other environmental change projections;
- (6) the best available scientific information; and,
- (7) detrimental human uses.

b. technical and economic feasibility to achieve desired future conditions.

c. ecological, social, and economic sustainability.

d. the recovery, maintenance, and enhancement of carbon stocks.

e. opportunities to incorporate restoration objectives into resource management projects to achieve complementary or synergistic results.

f. the concept that an ecological system is dynamic and follows an ecological trajectory

g. the social, economic and ecological influences of restoration activities at multiple scales.

3. The Forest Service may reestablish, maintain, or modify the composition, structure, function, and connectivity of aquatic and terrestrial ecosystems in order to sustain their resilience and adaptive capacity.

4. Activities with localized, short-term adverse effects may be acceptable in order to achieve long-term restoration objectives.

5. The definitions for following terms in this policy are identical to the definitions for the same terms in the National Forest System, Land Management Planning Directive: adaptation, adaptive capacity, adaptive management, disturbance, disturbance regime, ecological integrity, ecosystem, ecosystem services, landscape, natural range of variation (NRV), resilience, restoration–ecological, restoration–functional, stressors, and sustainability. (FSH 1909.12, zero code, section 05).
6. When ecosystems have been altered to such an extent that reestablishing key ecosystem characteristics within the NRV may not be ecologically or economically possible, the restoration focus should be to create functioning ecosystems.
7. Resource managers should consider ecological conditions across ownerships and jurisdictions to develop and achieve landscape restoration objectives by engaging the public, State and local governments, and consultation with Indian Tribes.
8. Not all natural resource management activities are required to include restoration, and not all National Forest System lands require restoration.

2020.4 – Responsibility

The responsible officials to carry out the Ecosystem Restoration Policy are the Agency employees who have the delegated authority to approve land and resource management plans, project plans, or other Forest Service activities.

2020.5 – Definitions

The definitions at the Land Management Planning Handbook, FSH 1909.12, zero code chapter, section 05 at

http://www.fs.fed.us/im/directives/fsh/1909.12/wo_1909.12_zero_code.docx apply for the

following terms in this policy: adaptation, adaptive capacity, adaptive management, carbon pool,

carbon stocks, disturbance, disturbance regime, ecological integrity, ecosystem, ecosystem services, landscape, natural range of variation (NRV), resilience, restoration–ecological, restoration–functional, stressors, and sustainability.

2020.6 – References

This section displays references to statutes, regulations, and Executive Orders related to the policies in FSM 2020.

2020.61 – References to Statutes

1. Text of the *Agricultural Act of 2014* (16 U.S.C. 6591c and 16 U.S.C. 2113a) Title VIII, Sections 8205 & 8206 is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2014-title16/pdf/USCODE-2014-title16-chap84-subchapVI-sec6591c.pdf> and <http://www.gpo.gov/fdsys/pkg/USCODE-2014-title16/pdf/USCODE-2014-title16-chap41-sec2113a.pdf>.

2. Text of the *Anderson-Mansfield Reforestation and Revegetation Joint Resolution Act of 1949* (at 16 U.S.C. 581j and 581 j(note)) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapII-sec581j.pdf>.

3. Text about visibility protection for Federal class I areas (43 U.S.C. 7491) and text about control of air pollution from Federal facilities under the *Clean Air Act* (42 U.S.C. 7401, 7418, 7470, 7472, 7474, 7475, 7491, 7506, 7602) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2014-title42/pdf/USCODE-2014-title42-chap85-subchapI-partC-subpartii-sec7491.pdf> and <http://www.gpo.gov/fdsys/pkg/USCODE-2014-title42/pdf/USCODE-2014-title42-chap85-subchapI-partA-sec7418.pdf>.

4. Text about Federal facilities water pollution control responsibilities (33 U.S.C. 1323) under the *Clean Water Act* (33 U.S.C. 1251, 1254, 1323, 1324, 1329, 1342, 1344) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2014-title33/pdf/USCODE-2014-title33-chap26-subchapIII-sec1323.pdf>.

5. Text of the *Endangered Species Act of 1973* (16 U.S.C. 1531-1544, as amended) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap35.pdf>.

6. Text of the *Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974*, as amended by *National Forest Management Act (NFMA)* of 1976 (16 U.S.C. 1600-1614, 472a) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2010-title16/html/USCODE-2010-title16-chap5C.htm>.

7. Text of the *Granger-Thye Act* (16 U.S.C. at 580g-h) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec580g.pdf> and <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec580h.pdf>.

8. Text of the *Healthy Forests Restoration Act (HFRA)* of 2003 (16 U.S.C. 6501-6591) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap84.pdf>.

9. Text of the *Knutson-Vandenberg Act* (16 U.S.C. at 576b) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec576b.pdf>.

10. Text of the *Magnuson-Stevens Fishery Conservation and Management Act of 2006* (16 U.S.C. 1855, as amended) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap38-subchapIV-sec1855.pdf>.

11. Text of the *Multiple-Use Sustained-Yield Act of 1960* (16 U.S.C. 528-531) is available at: <http://www.fs.fed.us/emc/nfma/includes/musya60.pdf>.

12. Text of the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title42/pdf/USCODE-2011-title42-chap55.pdf>.

13. Text of the North American Wetland Conservation Act (16 U.S.C. 4401 (note), 4401-4413, 16 U.S.C. 669b (note)). Section 9 (U.S.C. 4408) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap64-sec4408.pdf>.

14. Text of the *Organic Administration Act* (at 16 U.S.C. 475, 551) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap2-subchapI-sec475.pdf> and <http://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec551.pdf>.

15. Text of the *Sikes Act* (16 U.S.C. at 670g) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2010-title16/html/USCODE-2010-title16-chap5C.htm>.

16. Text of the *Tribal Forest Protection Act of 2004* (25 U.S.C. 3115a) is available at: <http://www.fs.fed.us/restoration/documents/stewardship/tfpa/TribalForestProtectionAct2004.pdf>.

17. Text of the *Weeks Act*, as amended (at 16 U.S.C. 515, 552) is available at: <http://www.fs.fed.us/land/staff/Documents/Weeks%20Law.pdf>.

18. Text of the *Wilderness Act* of September 3, 1964 (16 U.S.C. 1131-1136) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2012-title16/pdf/USCODE-2012-title16-chap23.pdf>.

19. Selected text of the *Wild and Scenic Rivers Act* of October 2, 1968 (Public Law 90-572; 16 U.S.C. 1271-1287), as amended, is available at: <http://www.rivers.gov/documents/wsr-act.pdf>.

2020.62 – References to Federal Regulations

1. Text of 36 CFR 219 governing land and resource management planning as amended through April 19, 2013 is available at: <http://www.gpo.gov/fdsys/pkg/CFR-2013-title36-vol2/pdf/CFR-2013-title36-vol2-part219.pdf>.

2020.63 – References to Executive Orders

1. Text of Executive Order 11514 issued March 5, 1970, as amended by E.O. 11991, issued May 24, 1977. Protection and enhancement of environmental quality (35 FR 4247, March 7, 1970; 42 FR 26967, May 25, 1977) is available at: <http://www.archives.gov/federal-register/codification/executive-order/11514.html>.

2. Text of the *Executive Order 11644* issued February 8, 1972. Use of off-road vehicles on the public lands. (37 FR 2877, February 9, 1972). Amended by E.O. 11989 issued May 24, 1977 and E.O. 12608 issued September 9, 1987 is available at: <http://www.archives.gov/federal-register/codification/executive-order/11644.html>.

3. Text of the *Executive Order 11988* issued May 24, 1977. Floodplain management (42 FR 26951 (May 25, 1977)) is available at: <http://www.archives.gov/federal-register/codification/executive-order/11988.html>.

4. Text of the Executive Order 11990 issued May 24, 1977. Protection of wetlands. (42 FR 26961, May 25, 1977) is available at: <http://www.archives.gov/federal-register/codification/executive-order/11990.html>.

5. Text of the *Executive Order 13112* issued February 3, 1999. Invasive Species. (64 FR 6183 (February 8, 1999)) is available at: <http://www.gpo.gov/fdsys/pkg/FR-1999-02-08/pdf/99-3184.pdf>.

6. Text of the *Executive Order 13653* issued November 1, 2013. Preparing the United States for the Impacts of Climate Change. (78 FR 66819 (November 6, 2013)) is available at: <http://www.gpo.gov/fdsys/pkg/FR-2013-11-06/pdf/2013-26785.pdf>.

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